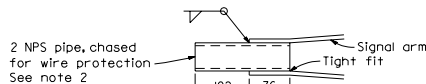


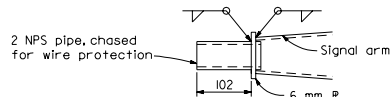
(ES-4D)

DETAIL S-SIDE TENON

PIPE TENONS

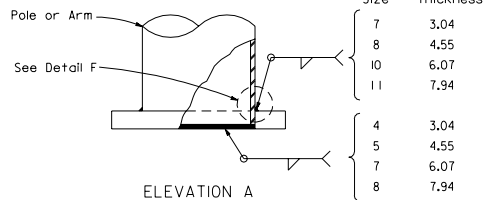
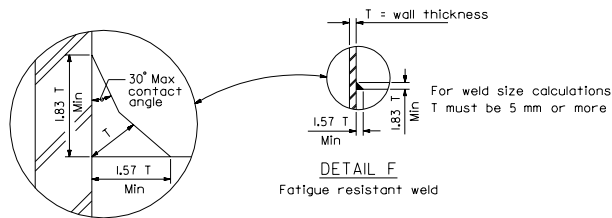


DETAIL TS-TIP TENON

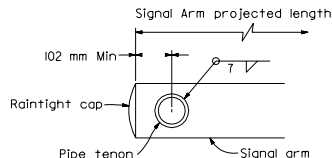


DETAIL TL-TIP TENON

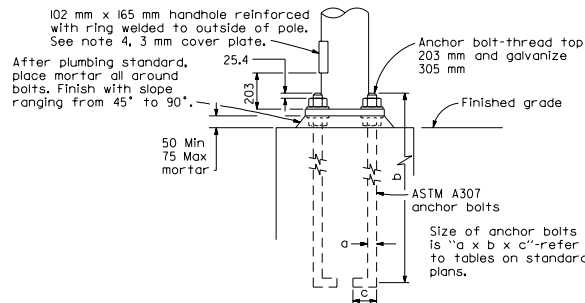
This detail supersedes Detail S when so designated



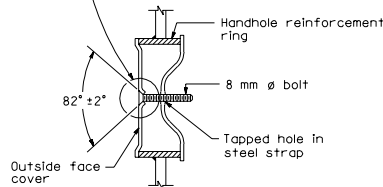
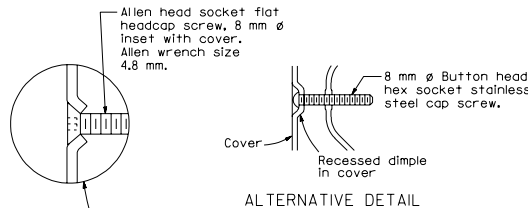
ELEVATION A



SECTION A-A



HANDHOLE AND ANCHORAGE DETAILS



TAMPER RESISTANT HANDHOLE COVER

IDENTIFICATION NUMBER

Attach a stamped metal tag with each pole's identification number to shaft above handhole, 7 mm high number minimum. A similar tag shall be attached to the top of the signal mast arm near the pole plate.

Sample Identification Number

Type Load case Design wind velocity Signal arm length Standard plan year Only for poles with welds
19A - 3 - 129 - 9J - 99 - F
Use SL for special load case

GENERAL NOTES

SPECIFICATIONS

DESIGN : AASHTO specifications for the design and construction of structural supports for highway signs, luminaires and traffic signals, dated 1994.

Loading

WIND LOADINGS : 129 km/h AASHTO

Unit Stresses

STRUCTURAL STEEL : $f_y = 331 \text{ MPa}$ (tapered sheet steel)

$f_y = 248 \text{ MPa}$ unless noted otherwise noted

CONSTRUCTION : Standard Specifications and the Special Provisions

NOTES

- 4-ASTM A-307 anchor bolts are required for each pole. Provide a hex nut, leveling nut and 2 washers for each bolt.
- Luminaire arms shall be round, tapered steel tubes, taper of 11.45 mm/m to 11.66 mm/m with an end section 60 mm OD for mounting hardware. Extensions of 2 NPS pipe and 178 mm long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 381 mm.
- Signal arms shall be round, tapered steel tubes, maximum taper 11.66 mm/m.
- Handhole reinforcement ring shall be 6 mm x 51 mm for 3.04 mm to 6.07 mm poles, 10 mm x 51 mm for 7.94 mm.
- Handholes for lighting standards shall be located on the downstream side of the pole unless otherwise noted on the plans.
- Detail F, fatigue resistant weld, is required at signal arm plate and pole base plate.
- In lieu of the torque requirements for HS bolts, cap screws shall be tightened by the turn-of-nut method 1/3 turn from a snug tight condition. No washer will be required.
- During pole erection, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- When Project Plans show a lesser number of signs and signals, the Project Plans shall prevail.
- Outside diameter, wall thickness, and corresponding section properties at the base of traffic signal poles and arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections require approval by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SIGNAL AND LIGHTING STANDARDS DETAILS NO. 1

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ES-7M